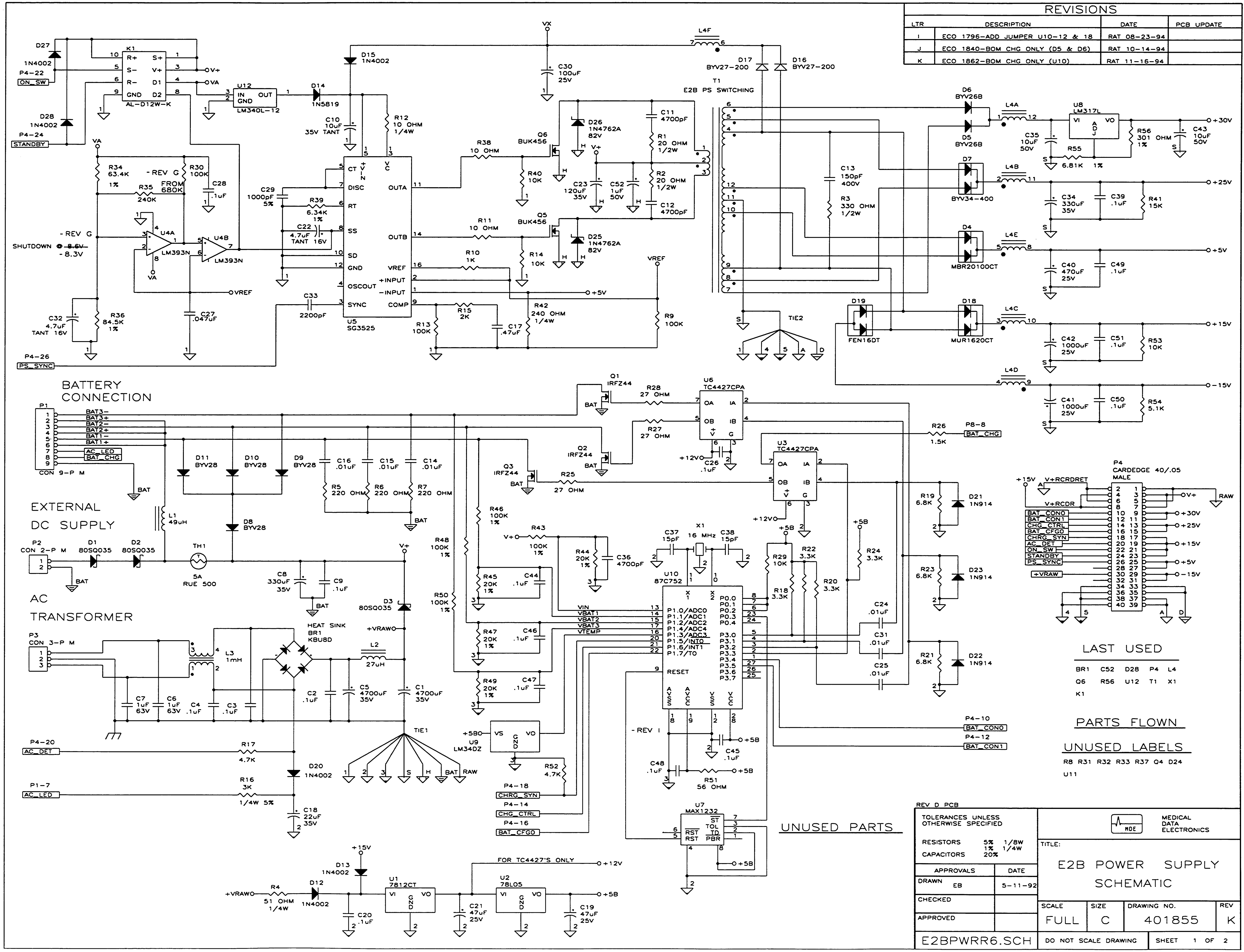


REVISIONS

LTR	DESCRIPTION	DATE	PCB UPDATE
I	ECO 1796–ADD JUMPER U10–12 & 18	RAT 08–23–94	
J	ECO 1840–BOM CHG ONLY (D5 & D6)	RAT 10–14–94	
K	ECO 1862–BOM CHG ONLY (U10)	RAT 11–16–94	

BATTERY CONNECTION
EXTERNAL DC SUPPLY
AC TRANSFORMER
K1 AL-D12W-K
D27 1N4002
D28 1N4002
P4-22 ON_SW
P4-24 STANDBY
U12 LM340L-12
D14 1N5819
D15 1N4002
C10 10uF 35V TANT
R12 10 OHM 1/4W
VX
C30 100uF 25V
L4F
D17 BYV27-200
D16 BYV27-200
T1 E2B PS SWITCHING
R34 63.4K 1%
R35 240K
-REV G FROM 680K
R30 100K
C28 .1uF
SHUTDOWN -8.6V -8.3V
-REV G
U4A LM393N
U4B LM393N
VREF
C32 4.7uF TANT 16V
R36 84.5K 1%
C27 .047uF
P4-26 PS_SYNC
C29 1000pF 5%
R39 6.34K 1%
C22 4.7uF TANT 16V
C33 2200pF
U5 SG3525
CT DISC RT SS SD GND OSCOUT SYNC OUTA OUTB VREF +INPUT -INPUT COMP
R38 10 OHM
R11 10 OHM
R10 1K
R15 2K
R13 100K
C17 .47uF
R42 240 OHM 1/4W
R9 100K
+5V
Q6 BUK456
Q5 BUK456
R40 10K
R14 10K
D26 1N4762A 82V
D25 1N4762A 82V
C23 120uF 35V
C52 1uF 50V
C11 4700pF
R1 20 OHM 1/2W
R2 20 OHM 1/2W
C12 4700pF
C13 150pF 400V
R3 330 OHM 1/2W
TIE2
D6 BYV26B
D5 BYV26B
L4A
U8 LM317L
C35 10uF 50V
R55 6.81K 1%
R56 301 OHM 1%
C43 10uF 50V
+30V
D7 BYV34-400
L4B
C34 330uF 35V
C39 .1uF
R41 15K
+25V
D4 MBR20100CT
L4E
C40 470uF 25V
C49 .1uF
+5V
D19 FEN16DT
D18 MUR1620CT
L4C
C42 1000uF 25V
C51 .1uF
R53 10K
+15V
L4D
C41 1000uF 25V
C50 .1uF
R54 5.1K
-15V
P1 CON 9-P M
BAT3- BAT3+ BAT2- BAT2+ BAT1- BAT1+ AC_LED BAT_CHG
D11 BYV28
D10 BYV28
D9 BYV28
D8 BYV28
C16 .01uF
C15 .01uF
C14 .01uF
R5 220 OHM
R6 220 OHM
R7 220 OHM
L1 49uH
P2 CON 2-P M
D1 80SQ035
D2 80SQ035
TH1 5A RUE 500
C8 330uF 35V
C9 .1uF
P3 CON 3-P M
L3 1mH
C7 1uF 63V
C6 1uF 63V
C4 .1uF
C3 .1uF
HEAT SINK BR1 KBU8D
D3 80SQ035
+VRAWO
L2 27uH
C2 .1uF
C5 4700uF 35V
C1 4700uF 35V
TIE1
P4-20 AC_DET
R17 4.7K
D20 1N4002
P1-7 AC_LED
R16 3K 1/4W 5%
C18 22uF 35V
Q1 IRFZ44
Q2 IRFZ44
Q3 IRFZ44
R28 27 OHM
R27 27 OHM
R25 27 OHM
U6 TC4427CPA
U3 TC4427CPA
C26 .1uF
+12V
R26 1.5K
P8-8 BAT_CHG
R46 100K 1%
R48 100K 1%
R50 100K 1%
R43 100K 1%
R44 20K 1%
C36 4700pF
R45 20K 1%
C44 .1uF
R47 20K 1%
C46 .1uF
R49 20K 1%
C47 .1uF
X1 16 MHz
C37 15pF
C38 15pF
U10 87C752
VIN VBAT1 VBAT2 VBAT3 VTEMP
P1.0/ADC0 P1.1/ADC1 P1.2/ADC2 P1.4/ADC4 P1.3/ADC3 P1.5/INT0 P1.6/INT1 P1.7/T0 RESET
P0.0 P0.1 P0.2 P0.3 P0.4 P3.0 P3.1 P3.2 P3.3 P3.4 P3.5 P3.6 P3.7
R29 10K
R22 3.3K
R18 3.3K
R20 3.3K
R24 3.3K
+5B
C24 .01uF
C31 .01uF
C25 .01uF
R19 6.8K
D21 1N914
R23 6.8K
D23 1N914
R21 6.8K
D22 1N914
-REV I
C45 .1uF
C48 .1uF
R51 56 OHM
U9 LM34DZ
R52 4.7K
P4-18 CHRG_SYN
P4-14 CHG_CTRL
P4-16 BAT_CFGO
P4-10 BAT_CONO
P4-12 BAT_CON1
U7 MAX1232
ST TOL TD PBR RST
P4 CARDEDGE 40/.05 MALE
V+RCRDRET
V+RCDR
BAT_CONO BAT_CON1 CHG_CTRL BAT_CFGO CHRG_SYN AC_DET ON_SW STANDBY PS_SYNC
+VRAW
RAW
V+
+30V +25V +15V +5V -15V
D13 1N4002
+15V
R4 51 OHM 1/4W
D12 1N4002
C20 .1uF
U1 7812CT
C21 47uF 25V
FOR TC4427'S ONLY
U2 78L05
C19 47uF 25V
+12V
+5B

LAST USED

BR1	C52	D28	P4	L4
Q6	R56	U12	T1	X1
K1				

PARTS FLOWN

UNUSED LABELS

R8 R31 R32 R33 R37 Q4 D24
U11

UNUSED PARTS

REV D PCB

TOLERANCES UNLESS OTHERWISE SPECIFIED
RESISTORS 5% 1/8W
1% 1/4W
CAPACITORS 20%

APPROVALS	DATE
DRAWN EB	5–11–92
CHECKED	
APPROVED	

MDE MEDICAL DATA ELECTRONICS

TITLE:
E2B POWER SUPPLY
SCHEMATIC

SCALE	SIZE	DRAWING NO.	REV
FULL	C	401855	K

E2BPWRR6.SCH
DO NOT SCALE DRAWING
SHEET 1 OF 2

Figure 3-3: Power Supply Schematic
3-5 / 3-6

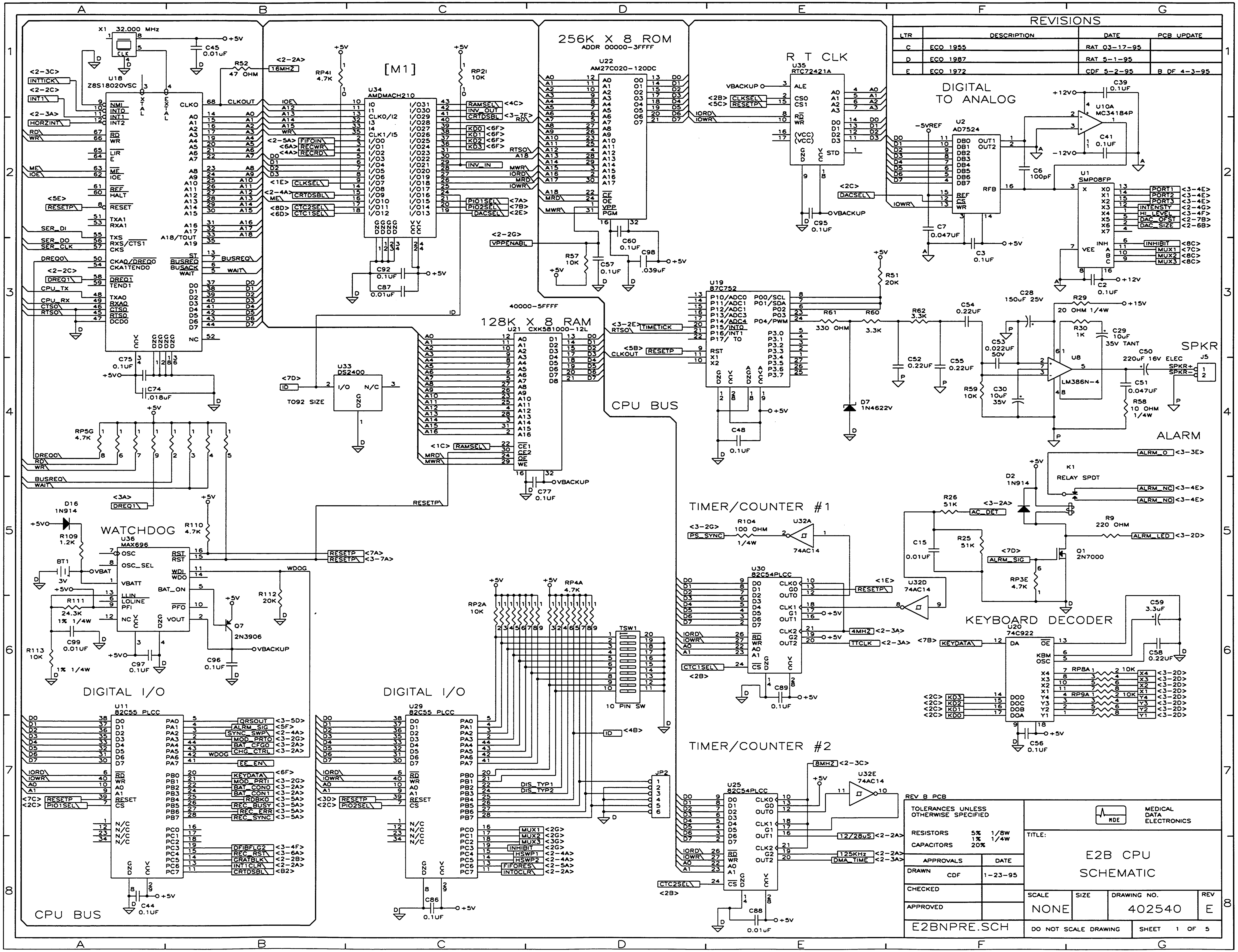

REVISIONS
LTR DESCRIPTION DATE PCB UPDATE
C ECO 1955 RAT 03-17-95
D ECO 1987 RAT 5-1-95
E ECO 1972 CDF 5-2-95 B DF 4-3-95
X1 32.000 MHz
U18 Z8S18020VSC
[M1]
U34 AMDMACH210
256K X 8 ROM
ADDR 00000-3FFFF
U22 AM27C020-120DC
R T CLK
U35 RTC72421A
DIGITAL TO ANALOG
U2 AD7524
U10A MC34184P
U1 SMP08FP
128K X 8 RAM
40000-5FFFF
U21 CXK581000-12L
U33 DS2400
TO92 SIZE
CPU BUS
U19 87C752
U8 LM386N-4
SPKR
J5
ALARM
K1 RELAY SPDT
D2 1N914
Q1 2N7000
WATCHDOG
U36 MAX696
Q7 2N3906
D16 1N914
BT1 3V
TIMER/COUNTER #1
U32A 74AC14
U30 82C54PLCC
U32D 74AC14
KEYBOARD DECODER
U20 74C922
DIGITAL I/O
U11 82C55 PLCC
DIGITAL I/O
U29 82C55 PLCC
TSW1
10 PIN SW
JP2
TIMER/COUNTER #2
U25 82C54PLCC
U32E 74AC14
CPU BUS
REV B PCB
TOLERANCES UNLESS OTHERWISE SPECIFIED
RESISTORS 5% 1/8W 1% 1/4W
CAPACITORS 20%
APPROVALS DATE
DRAWN CDF 1-23-95
CHECKED
APPROVED
MDE
MEDICAL DATA ELECTRONICS
TITLE:
E2B CPU SCHEMATIC
SCALE NONE
SIZE
DRAWING NO. 402540
REV E
E2BNPRE.SCH
DO NOT SCALE DRAWING
SHEET 1 OF 5

Figure 4-7: CPU Schematic
4-11 / 4-12

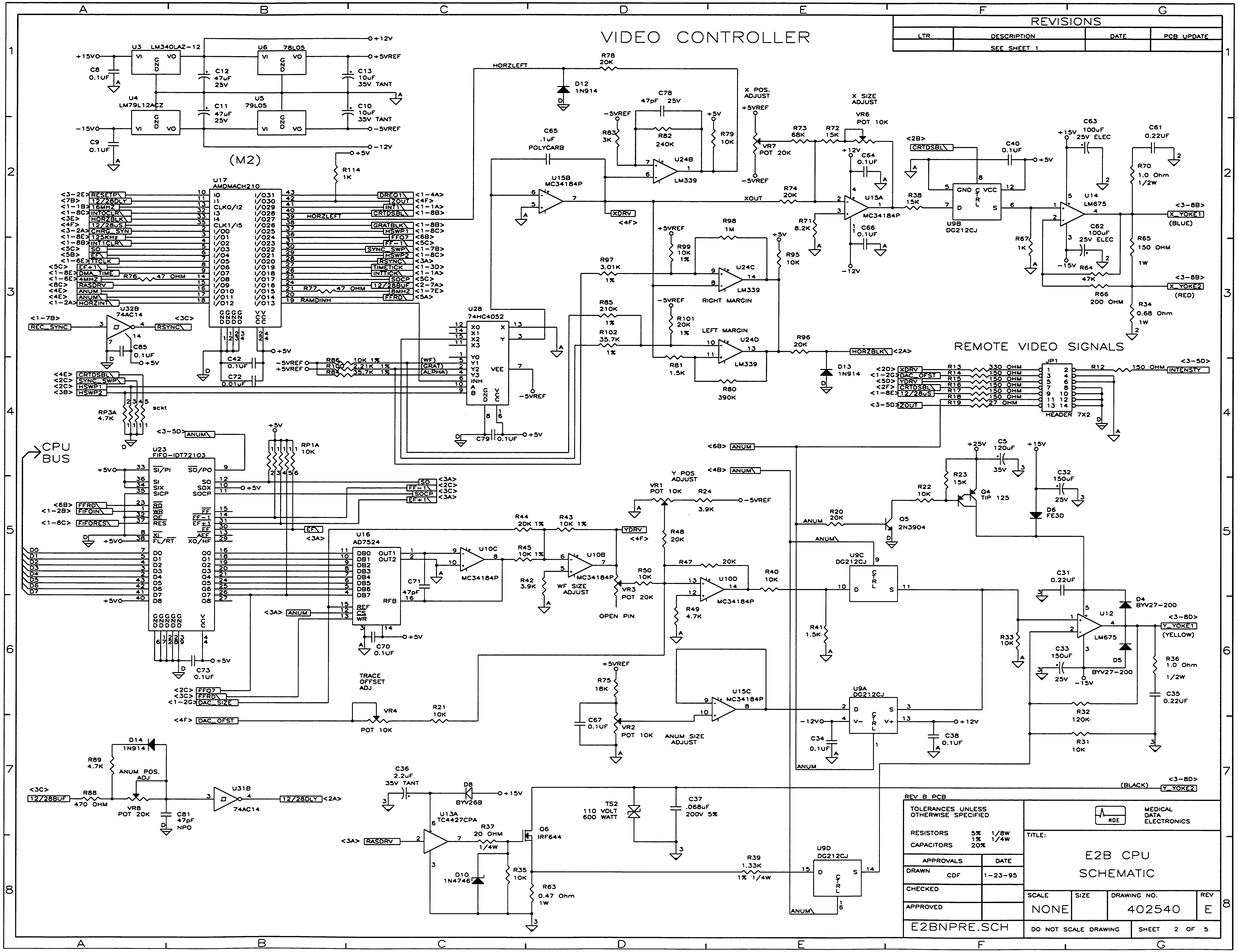
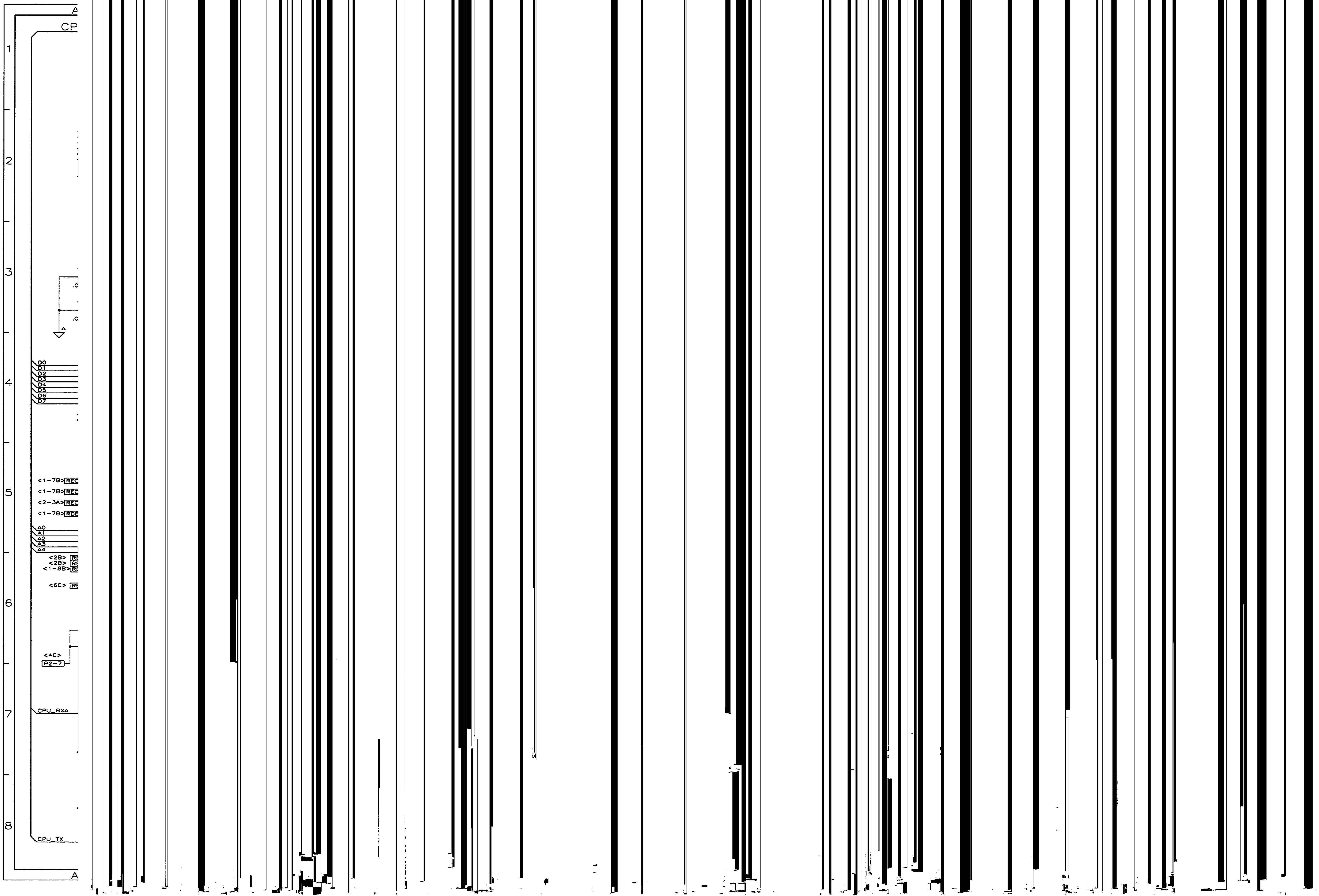

VIDEO CONTROLLER
REVISIONS
LTR
DESCRIPTION
DATE
PCB UPDATE
SEE SHEET 1
U3 LM340LAZ-12
U4 LM79L12ACZ
U6 78L05
U5 79L05
(M2)
U17 AMDMACH210
U32B 74AC14
U28 74HC4052
U15B MC34184P
U24B LM339
U24C LM339
U24D LM339
U15A MC34184P
U9B DG212CJ
U14 LM675
U23 FIFO-IDT72103
CPU BUS
U16 AD7524
U10C MC34184P
U10B MC34184P
U10D MC34184P
U9C DG212CJ
U9A DG212CJ
U12 LM675
U15C MC34184P
U31B 74AC14
U13A TC4427CPA
U9D DG212CJ
Q4 TIP 125
Q5 2N3904
Q6 IRF644
X POS. ADJUST
X SIZE ADJUST
RIGHT MARGIN
LEFT MARGIN
REMOTE VIDEO SIGNALS
JP1 HEADER 7X2
Y POS ADJUST
WF SIZE ADJUST
OPEN PIN
TRACE OFFSET ADJ
ANUM SIZE ADJUST
ANUM POS. ADJ
X_YOKE1 (BLUE)
X_YOKE2 (RED)
Y_YOKE1 (YELLOW)
Y_YOKE2 (BLACK)
REV B PCB
TOLERANCES UNLESS OTHERWISE SPECIFIED
RESISTORS 5% 1/8W 1% 1/4W
CAPACITORS 20%
APPROVALS
DATE
DRAWN CDF 1-23-95
CHECKED
APPROVED
MDE MEDICAL DATA ELECTRONICS
TITLE:
E2B CPU SCHEMATIC
SCALE NONE
SIZE
DRAWING NO. 402540
REV E
E2BNPRE.SCH
DO NOT SCALE DRAWING
SHEET 2 OF 5

Figure 4-7: CPU Schematic (continued)


A
CP
1
2
3
4
5
6
7
8
A
D0
D1
D2
D3
D4
D5
D6
D7
<1-7B> REC
<1-7B> REC
<2-3A> REC
<1-7B> RDE
A0
A1
A2
A3
A4
<2B> R
<2B> R
<1-8B> R
<6C> R
<4C>
P2-7
CPU_RXA
CPU_TX
A